

WHAT IS CLAIMED IS:

1. A liquid crystal display device, comprising:

a switching element substrate having switching elements;

a counter substrate opposite to the switching element substrate;

a liquid crystal layer formed between the substrates;

a sealing section provided so as to enclose a display area between the substrates for sealing liquid crystal constituting the liquid crystal layer, the sealing section having conductive particles;

first signal wiring, provided on one of the substrates for controlling the switching elements;

second signal wiring, provided on the other substrate so as to be opposite to the first signal wiring for applying a voltage to the liquid crystal layer; and

at least one transfer section for electrically connecting the first signal wiring or the second signal wiring and the substrate opposite to the first signal wiring or the second signal wiring via the conductive particles.

2. The liquid crystal display device set forth in Claim

1, wherein:

an input terminal of the first signal wiring and an input terminal of the second signal wiring are provided on one of the substrates.

3. The liquid crystal display device set forth in Claim 1, wherein:

the transfer section includes (a) a first contact pad, provided on a first substrate which is one of the substrates and has an input terminal of the first signal wiring and an input terminal of the second signal wiring, which is connected to one of the first signal wiring and the second signal wiring provided on the first substrate, (b) a second contact pad, provided on a second substrate which is the other substrate, which is connected to the other one of the first signal wiring and the second signal wiring on the second substrate (the other substrate), and (c) the conductive particles connected to the first contact pad and the second contact pad.

4. The liquid crystal display device set forth in Claim 2, wherein:

the transfer section includes (a) a first contact pad, provided on a first substrate which is one of the substrates and has the input terminal of the first signal

wiring and the input terminal of the second signal wiring, which is connected to one of the first signal wiring and the second signal wiring provided on the first substrate, (b) a second contact pad, provided on a second substrate which is the other substrate, which is connected to the other one of the first signal wiring and the second signal wiring on the second substrate (the other substrate), and (c) the conductive particles connected to the first contact pad and the second contact pad.

5. The liquid crystal display device set forth in Claim 3, wherein:

the first and second contact pads have substantially a same resistance.

6. The liquid crystal display device set forth in Claim 4, wherein:

the first and second contact pads have substantially a same resistance.

7. The liquid crystal display device set forth in Claim 3, wherein:

the transfer section is provided (a) between the first signal wiring and a first signal generation circuit

which provides a signal to the first signal wiring, or (b)between the second signal wiring and a second signal generation circuit which provides a signal to the second signal wiring.

8. The liquid crystal display device set forth in Claim 4, wherein:

the transfer section is provided (a)between the first signal wiring and a first signal generation circuit which provides a signal to the first signal wiring, or (b)between the second signal wiring and a second signal generation circuit which provides a signal to the second signal wiring.

9. The liquid crystal display device set forth in Claim 5, wherein:

the transfer section is provided (a)between the first signal wiring and a first signal generation circuit which provides a signal to the first signal wiring, or (b)between the second signal wiring and a second signal generation circuit which provides a signal to the second signal wiring.

10. The liquid crystal display device set forth in Claim 6, wherein:

the transfer section is provided (a)between the first signal wiring and a first signal generation circuit which provides a signal to the first signal wiring, or (b)between the second signal wiring and a second signal generation circuit which provides a signal to the second signal wiring.

11. The liquid crystal display device set forth in Claim 1, wherein:

a mean distribution volume D of the conductive particles (piece)/ mm^2 is within a range of $1000 \geq D > 5/S$, where an area of the transfer section in a direction parallel to the substrates is $S \text{ mm}^2$.

12. The liquid crystal display device set forth in Claim 11, wherein:

the mean distribution volume D is within a range of $600 \geq D > 5/S$.

13. The liquid crystal display device set forth in Claim 12, wherein:

the mean distribution volume D is within a range of $400 \geq D > 5/S$.

14. The liquid crystal display device set forth in Claim

3, wherein:

the first substrate is the switching element substrate having the switching elements.

15. The liquid crystal display device set forth in Claim 4, wherein:

the first substrate is the switching element substrate having the switching elements.

16. The liquid crystal display device set forth in Claim 3, wherein:

the input terminal of the first signal wiring and the input terminal of the second signal wiring are made of a conductive material whose resistance is smaller than that of the first signal wiring or the second signal wiring formed on the second substrate.

17. The liquid crystal display device set forth in Claim 4, wherein:

the input terminal of the first signal wiring and the input terminals of the second signal wiring are made of a conductive material whose resistance is smaller than that of the first signal wiring or the second signal wiring formed on the second substrate.

18. The liquid crystal display device set forth in Claim 3, wherein:

an insulation film having an opening is formed on at least one of the substrates, and the first contact pad or the second contact pad is provided in the opening.

19. The liquid crystal display device set forth in Claim 4, wherein:

an insulation film having an opening is formed on at least one of the substrates, and the first contact pad or the second contact pad is provided in the opening.

20. The liquid crystal display device set forth in Claim 1, wherein: the conductive particles have elasticity.

21. The liquid crystal display device set forth in Claim 20, wherein:

the conductive particles have round shapes and diameters which are greater than a cell thickness of the sealing section.

22. The liquid crystal display device set forth in Claim 1, wherein:

the conductive particles are provided only in an area which is 50 μm or more far from an interface between

the liquid crystal layer and the sealing section.

23. The liquid crystal display device set forth in Claim 1, wherein:

the conductive particles are coated with a conductive material.

24. The liquid crystal display device set forth in Claim 3, wherein:

the transfer sections are provided alternately along both edges of a width in the sealing section, and a width of the second signal wiring is narrower than that of the second contact pad.